

REMARKS

Reconsideration of the present application is requested on the basis of the following particulars.

1. In the Specification

The specification has been amended to include appropriate section headings and to remove reference to the pending claims in the "Summary of the Invention." Acceptance of the amendments to the specification is requested in the next communication from the Examiner.

2. In the Claims

Claim 18 has been amended to reincorporate the subject matter indicating that the dirt repellent surface coating lacks a filler substance and includes a binder. Since claim 18 reincorporates previously removed subject matter, it is respectfully submitted that no new subject matter has been introduced into claim 18.

Acceptance of the amendment to claim 18 is respectfully requested in the next communication from the Examiner.

3. Rejection of Claims 18-19, 21, 23, 26-28 and 35 as Being Unpatentable Over U.S. Patent 5,871,833 (Henbo et al.)

Claims 18-19, 21, 23, 26-28 and 35 presently stand rejected in view of the disclosure of Henbo et al. This rejection is respectfully traversed on the basis that the Henbo et al. disclosure fails to disclose or suggest the security paper embodiment recited claim 18 of the present application. Claims 19, 21, 23, 26-28 and 35, which depend directly from claim 18, are thus patentable based on their dependency from claim 18 and their individually recited features.

The disclosure of Henbo et al. describes a forgery preventive fretwork paper comprising a support layer and an engraving coating layer. The teachings of Henbo

et al. are considered to teach the security paper of the present application on the basis that the structural differences between the coating of claim 18 and the coating of Henbo et al. are not sufficient distinguishable, and that Henbo et al. describe the coating of the present application. More specifically, it is alleged in the Office Action that Henbo et al. disclose a security paper having a dirt repellent surface coating that is disposed on at least one surface of a paper layer and which comprises a non-polyurethane composition that lacks a filler substance.

Applicants respectfully disagree with the assessment of the teachings of Henbo et al. in view of the security paper recited in claim 18 of the present application.

First, there are structural differences between the coating layer of Henbo et al. and the coating of the security paper of claim 18. In observing FIG. 2 and col. 6, lines 1-11 of the disclosure of Henbo et al., the coating layer is an engraving layer 4 upon which an image 5 may be formed over a support layer 1. As clearly illustrated in FIG. 2, the engraving layer does not cover at least one surface of the support layer, as in the coating of claim 18 of the present application. Instead, it is readily apparent that the engraving layer is only provided over portions of the support layer, whereas the support layer is exposed at areas in between such coated areas (see areas 1c). This observation begs the question as to how the Henbo et al. disclosure can be construed to teach coating at least one surface of the support layer when there are portions of the support layer that are widely exposed.

Applicants submit that the Henbo et al. disclosure describes a paper having a structural configuration appreciably different from the structure of the security paper of claim 18. Namely, Henbo et al. fails to disclose or suggest a security paper wherein the at least one surface of the security paper is coated with a dirt repellent surface coating, and instead describes a coating that only coats portions of the paper and leaves the exposed regions unprotected from dirt.

Turning to the composition of the engraving coating layer of Henbo et al., it is readily evident that the composition of the engraving coating layer of Henbo et al. is different from the coating layer recited in claim 18 of the present application. In the Action, column 5, lines 4 through 24 are relied upon in the Henbo et al. disclosure as describing the composition of the coating of claim 18. In the selected passage, it will be pointed out that Henbo et al. explicitly describe the engraving layer as "comprising a binder resin...and fine inorganic powder in an amount of from 80 to 50% by weight on a solid basis." (col. 5, lines 4-7). Henbo et al. also describe preferred binders as being synthetic polyester or polyurethane resins (col. 5, lines 15-24). Moreover, the fine inorganic powder basically serves as a filler, and preferably includes titanium dioxide.

The teachings of the composition of Henbo et al. are contradictory to the composition of the coating recited in claim 18 of the present application. As made readily apparent from claim 18 as presently recited, the coating of the present invention does not include fillers such as titanium dioxide. It will be pointed out that the specification of the present application specifically identifies titanium dioxide as a filler that is wholly undesirable in the composition of the binder of the present application (col. 2, lines 2-4). Moreover, as recited in claim 18, polyurethane resins are clearly excluded from the coating composition, unlike in the engraving coating layer of Henbo et al. wherein polyurethane resins are preferred.

In view of the observations on the engraving coating layer composition of Henbo et al., Applicants cannot understand how the teachings of Henbo et al. can be construed to suggest to one of ordinary skill in the art to make the coating of claim 18. Accordingly, it is respectfully submitted that indeed the disclosure of Henbo et al. does not disclose nor suggest the coating composition of claim 18 of the present application.

Turning to the purpose of the invention described by Henbo et al., this disclosure provides a fretwork paper that overcomes the drawbacks of known

fretwork papers such as the development of burrs upon engraving and rumpling of the paper during paper feed or discharge during use. Henbo et al. teach the use of providing a stretched laminate as a support layer (col. 2, lines 19-23). There is nothing to suggest that the engraving coating layer is to be provided as a dirt repellent surface and it is abundantly clear that the Henbo et al. disclosure does not focus on the problem of improving durability of security papers or documents of value.

It will be pointed out that there is no evidence provided in the disclosure of Henbo et al. of the desirability to provide a non-polyurethane protective coating free of fillers. As indicated previously in our remarks on June 27, 2002, the advantages of the coating of the present application provides significant advantages over known coatings.

The coating of the present application is processed so as to protect the security paper and therefore extend its circulation life. Essential to the properties of the coating is that the coating does not alter the printability, sound and color of the present invention (see specification: page 1, lines 7 to 5 from the bottom).

In the present application, the coating is formed from a composition containing only a binder. The composition does not include any fillers or polyurethane. It has been found that a binder composition without fillers has superior wetting properties and forms a complete surface film over the fibers of a security paper (see specification: page 2, first paragraph).

Surface coatings based on polyurethane are not satisfactory for use in regards to printing properties and surface hardness of security articles. Furthermore, coatings based on polyurethane require large amounts of solvent. In the present invention, the addition of polyurethane was avoided so that the composition of the coating excluded both fillers and polyurethane. The composition of the present invention provides for improved printed properties and contains substantially less solvent so that its processing has a lower environmental impact.

Applicants submit that there is no suggestion in the disclosure of Henbo et al. that would motivate one of ordinary skill in the art to provide a security paper arranged with a coating having the composition recited in claim 18 of the present application. On the contrary, Henbo et al. clearly describe additives and compositions which are excluded from the coating composition of the present application.

In summary, Applicants have carefully considered this rejection but it is most respectfully traversed for the reasons discussed above. Accordingly, Applicants respectfully request reconsideration of the rejection and the withdrawal thereof.

4. Rejection of Claims 22, 24-25 and 38-40 as Being Unpatentable Over U.S. Patent 5,871,833 (Henbo et al.) in View of U.S. Patent 4,943,093 (Melling et al.)

Claims 22, 24-25 and 38-40 presently stand rejected as being obvious in view of the Henbo et al. and Melling et al. disclosures. Applicants submit that the Melling et al. disclosure fails to make up for the basic shortcomings of the Henbo et al. disclosure described above in reference to claim 18. Claims 22, 24-25, which depend directly from claim 18, are patentable based on their dependency from claim 18 and their individually recited features. Claim 38, and claims 39 and 40, which depend from claim 38, are patentable based on the patentability of claim 38.

In observing the disclosure of Melling et al., it is clear that this disclosure relates to a security paper that includes a metallized security device, such as a metallized strip or thread, which has a coating thereon. Of particular importance is that the security paper itself is not provided with a coating, but instead the coating is described as providing the security device with additional visual effects (col. 1, line 61 through col. 2, line 60). Accordingly, Melling et al. do not teach nor suggest coating at least one surface of security paper with a coating.

It is clear from the Melling et al. disclosure that there is no disclosure or suggestion of the inventive coating of the present application. Instead, Melling et al. merely disclose a security device having a coating that provides visual effects.

Hence, the proposed combination of the Henbo et al. and Melling et al. disclosures, whether considered collectively or individually, fail to disclose or suggest the claimed security papers recited in claims 18 and 38 of the present application. The claims dependent from claims 18 and 38 are thus patentable based on their dependency from either claim 18 or claim 38, and their individually recited features. Withdrawal of this rejection is respectfully requested.

5. Rejection of Claims 29-34 and 36-45 as Being Unpatentable Over U.S. Patent 5,817,205 (Kaule) in View of U.S. Patent 5,871,833 (Henbo et al.)

Claims 29-34 and 36-45 presently stand rejected in view of the combination of the Kaule and Henbo et al. disclosures. This rejection is traversed on the grounds that the disclosure of Kaule fails to disclose or suggest the documents of value, security paper and methods recited in claims 29-34 and 36-45 of the present application. The Henbo et al. disclosure fails to make up for the shortcomings of the Kaule reference.

The Kaule disclosure describes a method for making a data carrier that includes a surface portion corresponding to an optically variable element that is smoother than the remaining surface of the data carrier. It will be noted, however, that the Kaule disclosure does not contain a description nor a suggestion concerning the application of a dirt repellent surface coating to the data carrier described therein.

According to the teachings of Kaule, the paper is adapted to the smoothness required for the optically variable element by local glazing in the surface area intended for the optical element (col. 4, lines 36-40). Glazing is performed by pressing the paper fibers together irreversibly (col. 7, line 66 through col. 8, line 1),

or by coating (col. 8, line 53). The coatings consist of binders and of mineral pigments in the micrometer range (col. 5, lines 8-12).

It is well understood that the coatings described by Kaule are not capable of repelling dirt or improving the durability of security paper, but instead improve the acceptance of optically variable security elements.

According to column 5, line 62, the Kaule disclosure indicates that protective layers may be applied. While it is true that the coatings according to the present invention are “protective coatings,” the Kaule disclosure does not provide any teachings regarding the nature, composition or specific properties of the “protective layers” described therein. In the absence of a specific teaching as to the exclusion of a filler substance or polyurethane in a protective surface coating, Applicants submit that the Kaule disclosure does not render the coating of the present application obvious.

While in the Office Action it is alleged that the coating of Kaule lacks both polyurethane and a filler substance, it is not understood how the mere absence of any description related to the composition of a protective coating can serve as a viable reference to one skilled in the art to prepare and apply the inventive surface coating of the present application to a document of value or security paper. There is simply no explicit nor implicit teaching in the Kaule disclosure that would motivate a skilled artisan to specifically exclude a filler substance and polyurethane from a surface coating.

It is well understood that obviousness cannot be established by combining references without providing evidence of the motivating force which would impel one skilled in the art to do what is disclosed in Applicants’ application. In view of the above-observations on the disclosure of Henbo et al., and the following observations of the Kaule disclosure, it is respectfully submitted that these references, whether

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Examiner: Reinhard Plaschka
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considered collectively or individually, fail to teach or suggest the embodiments of claims 29-34 and 36-45 of the present application.

Therefore, withdrawal of the rejection is respectfully requested.

6. Conclusion

In view of the amendment to the claim 18, and further in view of the foregoing remarks, it is respectfully submitted that the application is in condition for allowance. Accordingly, it is respectfully requested that claims 18, 19 and 21-45 be allowed and the application be passed to issue.

If any issues remain that may be resolved by a telephone or facsimile communication with the Applicants' Attorney, the Examiner is invited to contact the undersigned at the numbers shown below.

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Respectfully submitted,



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